

IN THE CLAIMS:

1 (currently amended). A method of forming a weld between plastics workpieces over a joint region, the method comprising:
providing a radiation absorbing material at the joint region that has an absorption band in the range 780-1500 nm matched to a wavelength of incident radiation so as to absorb the incident radiation and generate heat, the wavelength of the incident radiation being outside the visible range;

exposing the joint region to incident radiation so as to cause melting of the surface of at least one workpiece at the joint region;
allowing the melted material to cool so as to weld the workpieces together;

wherein the workpieces include a first workpiece and a second workpiece, the first workpiece being any one of clear to translucent, the second workpiece being any one of tinted to opaque, and the radiation absorbing material being a radiation absorbing dye that is visually transmissive when the workpieces are welded together and when viewed through the first workpiece.

2 (original). A method according to claim 1, wherein the radiation absorbing material is sandwiched between two workpieces.

3 (original). A method according to claim 1, wherein the radiation

absorbing material is provided in at least one of the workpieces.

4 (original). A method according to claim 1, wherein the radiation absorbing material is provided on a substrate by moulding the substrate in a mould with an insert formed by or including the radiation absorbing material.

5 (original). A method according to claim 1, wherein the radiation absorbing material is provided as a coating on a substrate.

6 (original). A method according to claim 1, wherein the radiation absorbing material is provided by coextruding the material with a substrate.

7 (previously presented). A method according to claim 1, wherein the radiation absorbing material is exposed to radiation prior to positioning the workpieces together.

8 (previously presented). A method according to claim 1, wherein the radiation absorbing material is exposed to radiation through one of the workpieces.

9 (cancelled).

10 (cancelled).

11 (cancelled).

12 (original). A method according to claim 11, wherein the absorption band defines the range 780-1100nm.

13 (previously presented). A method according to claim 1, wherein the absorption band defines the range 820-860nm.

14 (cancelled).

15 (previously presented). A method according to claim 1, wherein the absorption band does not include the range 400-700nm.

16 (cancelled).

17 (previously presented). A method according to claim 1, wherein the wavelength of the incident radiation lies in the range 700-2500nm.

18 (original). A method according to claim 17, wherein the wavelength of the incident radiation lies in the range 790-860nm.

19 (original). A method according to claim 17, wherein the

wavelength of the incident radiation lies in the range 940-980nm.

20 (previously presented). A method according to claim 1, wherein the radiation is a laser beam.

21 (previously presented). A pair of workpieces which have been welded by a method according to claim 1.

22 (previously presented). A method according to claim 1, wherein the workpieces comprise fabrics.

23 (previously presented). A method according to claim 22, wherein the fabrics are nylon-based fabrics.

24 (previously presented). A method according to claim 22, wherein the fabrics are polyurethane coated.

25 (previously presented). A method according to claim 22, wherein the fabrics comprise polyamide/polytetrafluoroethylene laminated fabrics.

26 (previously presented). A method according to claim 1, wherein the workpieces comprise thin films such as polyester or fluoropolymer.

27 (currently amended). A method according to claim 1 9, wherein the workpieces are made of thermoplastic.

28 (previously presented). A method according to claim 27, wherein the thermoplastic workpieces are textiles.

29 (currently amended). A method according to claim 1 9, wherein the workpieces are thermoplastic films.